

REMARKS

The present amendment is in response to the Office Action dated September 14, 2005. Claims 1-16, 18, and 19 are now present in this case. Claims 1, 2, 3, 4, and 18 are amended.

The applicant wishes to express her appreciation to the Examiner for the indication that claims 8 and 16 would be allowable if placed in independent form. However, these claims are believed allowable in their present form, as will be discussed in greater detail below.

Claims 4-6 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Claim 4 has been amended to provide the proper antecedent basis. Accordingly, the applicant respectfully requests that the rejection of claims 4-6 under 35 U.S.C. § 112, second paragraph, be withdrawn.

Claims 1-7, 9-15, and 18-19 stand rejected under 35 U.S.C. § 103(a) as unpatentable by U.S. Patent No. 5,987,345 to Engelmann et al. combined with U.S. Patent No. 5,754,676 to Komiya et al. The applicant respectfully traverses this rejection and requests reconsideration. Engelmann discloses techniques for displaying medical images. The Office Action states, at the top of page 4, that Engelmann discloses an image analysis indicator showing a color scale variation corresponding to the different characteristics of the data. This is incorrect. The indicator in Engelmann is essentially a positive/negative indicator to show whether or not a particular image contains positive or negative results. There is no color scale variation corresponding to different image characteristics as asserted by the Office Action. Indeed, in the following paragraph on page 4, the Office Action correctly states that Engelmann does not expressly disclose a color scale variation on the visual display. Given that Engelmann does not disclose a color scale variation, Engelmann can hardly be held to disclose a status indicator showing the color scale variation. The Office Action asserts that Komiya discloses such a color scale variation. However, the section of Komiya cited in the Office Action (column 11, lines 39-50) merely state that the color display unit (*i.e.*, a CRT or flat panel) changes the color of a region of interest in accordance with a determination value, such as green for normal tissue, red for malignant, etc. While Komiya uses

different colors to indicate different tissue characteristic determinations, the combination of references do not teach or suggest the user interface recited in claim 1. Specifically, claim 1 recites *inter alia* “a color scale variation on the visual display of the image configured to provide a first color scale variation of those data points in the image that have been analyzed and determined to have a first common characteristic and configured to provide a second color scale variation of those data points in the image that have been analyzed and determined to have a second common characteristic” with “an image analysis indicator on each of the plurality of data sets that contain at least one data point determined to have the common characteristic, the image analysis indicator showing the color scale variation corresponding to the different characteristics of the data.” As discussed above, the so-called image analysis indicator in Engelman is, in reality, a status indicator having a binary value (*i.e.*, positive result or a negative result.) There is no suggestion in the combination of references of a color scale variation and an image analysis indicator on each of the plurality of data sets having an image analysis indicator showing the color scale variation corresponding to the different characteristics of the data when a particular one of the plurality of data sets contains at least one data point determined to have the common characteristic. Accordingly, claim 1 is clearly allowable over the combination of Engelman and Komiya. Claim 2 is also allowable in view of the fact that it depends from claim 1, and further in view of the recitation within the claim.

With respect to claim 3, the Office Action asserts that Komiya discloses a color overlay on the image indicating locations on the image that correspond to tissues of interest. This is incorrect. Komiya does teach generating different colors corresponding to different tissue characteristics, but does not do so as a graphic overlay. Nothing in either reference suggests such a graphic overlay. As discussed in the specification, the advantage of such an overlay is the ability to selectively display the graphic overlay to identify tissues having a common characteristic, and to remove the graphic overlay to allow the physician or other health care giver to analyze the underlying tissue without the color overlay. Merely providing a color image is significantly different from an overlay. A graphic overlay is defined in computer graphics

as superimposing one graphic image over another or, “in video, to superimpose a graphic image generated on a computer over video signals, either live or recorded.” *Microsoft Computer Dictionary*, 5th ed., Microsoft Press, Redmond, WA., © 2002. Generating an output for a color monitor is not the equivalent of an overlay and does not suggest an overlay, such as recited in claim 3.

Furthermore, claim 3 recites “an indicator on the visual display terminal at a location spaced apart from the image indicating that the image has the color overlay thereon.” As discussed above, the color overlay on the image has significant diagnostic advantages. The indicator on the visual display recited in claim 3 indicates that a particular image has the color overlay thereon. There is no equivalent indicator in either Engelmann or Komiya. The Office Action indicates that Engelmann discloses such an indicator. This is incorrect. The only indicator disclosed in Engelmann is a status indicator indicating a positive or negative result for a particular image. This has nothing to do with the presence or absence of a color overlay on a particular graphic image. The combination of Engelmann and Komiya do not teach or suggest the user interface of claim 3. Accordingly, claim 3 is clearly allowable over the combination of Engelmann and Komiya. Claims 4-10 are also allowable in view of the fact that they depend from claim 3, and further in view of the recitation in each of those claims.

With respect to claim 11, the Office Action asserts that Komiya discloses a tissue of interest indicator selectively displayable on the terminal and that Engelmann discloses a marking associated with the images that contain a region of interest similar to the tissue of interest and that the markings have a first form when the tissue of interest indicator is selectively turned on and a second form when the tissue of interest indicator is selectively turned off. (See Office Action, page 7.) This is incorrect. The section of Komiya cited in support of the assertion in the Office Action merely allows the user to designate a particular area in the image to be classified. The so-called marking associated with the images in Engelmann is merely the on/off status indicator that shows whether an image contains a positive or negative result. Nothing in Engelmann teaches or suggests that the markings have a first form when the tissue of interest indicator is turned on and a second form when the tissue of interest indicator is

selectively turned off, as recited in claim 11. The status indicator in Engelmann is always on and is either one color (e.g., red) with a positive result and a second color (e.g., green) to indicate a negative result. The two status colors do not bear any relationship to whether or not the tissue of interest indicator has been selectively turned on or selectively turned off, as recited in claim 11. Nothing in the combination of references suggests such a user interface. Accordingly, for these reasons, among others, claim 11 is clearly allowable over the combination of Engelmann and Komiya. Claims 12-16 are also allowable in view of the fact that they depend from claim 11, and further in view of the recitation in each of those claims.

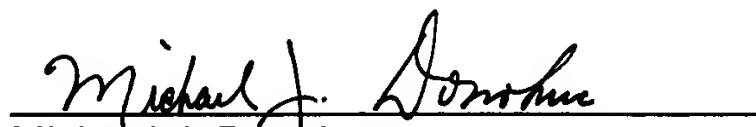
With respect to claim 18, neither Engelmann nor Komiya, taken alone or in combination, suggests locating first and second tissue types and analyzing images to determine characteristics of first and second tissue types, performing a computer analysis on an image to locate tissues having similar characteristics to the first and second tissue types within the images, selecting the first or second tissue type and placing an analysis status indicator associated with each image that contains the selected tissue type. At best, Engelmann places a positive/negative status indicator on images to indicate positive or negative results, but does not do so on the basis of selected tissue types, as recited in claim 18. Komiya does not make up for this serious deficiency. Although Komiya identifies tissue types, there is no suggestion in either reference for identifying characteristics of first and second tissue types, selecting a tissue type, and placing an analysis status indicator associated with each image that contains the selected tissue type. Accordingly, claim 18, and dependent claim 19, are clearly allowable over Engelmann and Komiya.

In view of the above amendments and remarks, reconsideration of the subject application and its allowance are kindly requested. The applicant has made a good faith effort to place all claims in condition for allowance. If questions remain regarding the present application, the Examiner is invited to contact the undersigned at (206) 628-7640.

Respectfully submitted,

Shawni Daw

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A handwritten signature in cursive script, reading "Michael J. Donohue", is written over a horizontal line.

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